



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,873	12/10/2003	Gilles Benoit	13445-030001 / L7 (MIT 10	8066
26161 7590 04/20/2007 FISH & RICHARDSON PC P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			EXAMINER ROJAS, OMAR R	
			ART UNIT 2874	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/20/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/733,873	BENOIT ET AL.	
	Examiner	Art Unit	
	Omar Rojas	2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26-48, 74-76 and 82-87 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 82-84, 86 and 87 is/are allowed.
- 6) ☒ Claim(s) 26, 27, 33-48 and 85 is/are rejected.
- 7) ☒ Claim(s) 28-32 and 74-76 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>Detailed Action</u> |

Art Unit: 2874

DETAILED ACTION

Response to Amendment

1. With regards to the amendment filed on February 20, 2007, all the requested changes to the claims and specification have been entered. Applicant's careful attention in addressing the concerns made by the examiner in the previous Office action is appreciated. Claims 26-48, 74-76, 82-87 are pending.

Response to Arguments

2. Applicant's arguments, see pages 9-10, filed February 20, 2007, with respect to the rejection(s) of claim(s) 26, 27, 33-35, 37-51, 58, 59, 62-69, 71-73, and 80 under 35 U.S.C. § 102 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art.

Terminal Disclaimer

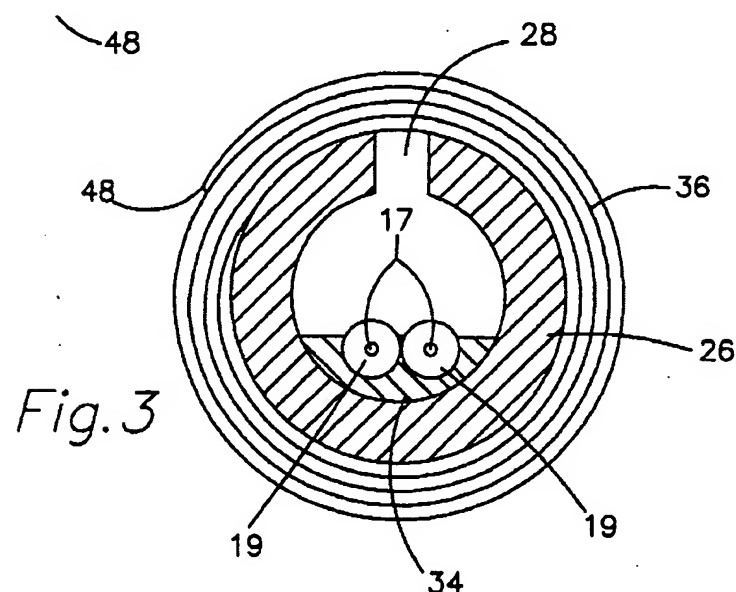
3. The terminal disclaimer filed on February 20, 2007 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of any patent granted on Application Number 10/196,403 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 102

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. **Claims 26, 27, 33-48, and 85 rejected under 35 U.S.C. 102(b) as being anticipated by Patent No. 5,533,161 to Atkeisson et al. ("Atkeisson")**

In re claims 26 and 27, Atkeisson discloses a fiber waveguide (10) comprising alternating layers (36, 40) of different materials surrounding a core (16, 17, and/or 26) extending along a longitudinal waveguide axis, the alternating layers (36, 40) define a spiral structure in a cross-sectional plane normal to the longitudinal waveguide axis of core (16, 17, and/or 26), the spiral structure comprises a multilayer structure comprising at least two layers (36, 40) of the different materials encircling the core (16, 17, and/or 26) multiple times. See column 3, line 20 to column 4, line 58 for further details. Figure 3 of Atkeisson is reproduced below.



In re claims 33-35 and 37-48, the additional limitations recited by these claims do not further define any additional device structure and are considered functional recitations. Applicant(s) are reminded that the Patent Office is not equipped to test prior art inventions to determine whether they exhibit certain properties or are capable of performing intended uses. Since Atkeisson discloses all the positively defined structural features of claims 33-35 and 37-48, the device of Atkeisson is considered inherently capable of performing or exhibiting the functional limitations recited by these claims 33-35 and 37-48.

Art Unit: 2874

In re claims 36 and 85, the core (26) of Atkeisson is also hollow as evidenced by slot (28).

Allowable Subject Matter

6. Claims 82-84, 86, and 87 are allowed.

7. Claims 28-32 and 74-76 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter: With respect to claims 28, 29, and 82, the primary reason for allowance of the claims is the inclusion of the different materials comprise a high-index dielectric material and a low-index dielectric material, and wherein a ratio of the refractive index of the high-index material to that of the low-index material is greater than 1.5. With respect to claims 30, 31, and 83, the primary reason for allowance of the claims is the inclusion of the different materials comprise a polymer and a chalcogenide glass. With respect to claims 32 and 84, the primary reason for allowance of the claims is the inclusion of the inner most layer of the alternating layers has a thickness smaller than that of subsequent layers of the same material. With respect to claims 74 and 86, the primary reason for allowance of the claims is the inclusion of the fiber waveguide is a photonic crystal fiber waveguide. With respect to claims 75, 76, and 87, the primary reason for allowance of the claims is the inclusion of the refractive index for at least one of the alternating layers is larger than that for the core. The aforementioned features are not disclosed or suggested by Atkeisson. Furthermore, there is insufficient evidence at this time such that a rejection of claims 28-32, 74-76, 82-84, 86, or 87 would be considered proper under either 35 U.S.C. § 102 or 103.

Art Unit: 2874

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Omar Rojas whose telephone number is (571) 272-2357. The examiner can normally be reached on Monday-Friday (9:00PM-5:00PM).

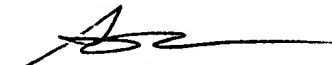
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rod Bovernick, can be reached on (571) 272-2344. The official facsimile number for regular and After Final communications is (571) 273-8300. The examiner's RightFAX number is (571) 273-2357.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Omar Rojas
Patent Examiner
Art Unit 2874

or
April 5, 2007



SUNG PAK
PRIMARY EXAMINER